# **KASNEB**

### **CIFA PART II SECTION 3**

#### **CORPORATE FINANCE**

WEDNESDAY: 25 May 2016.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question. Show ALL your workings.

### **QUESTION ONE**

(a) Summarise three disadvantages of common models used for predicting corporate failure.

(3 marks)

(b) (i) Propose three reasons why a company could participate in a share repurchase exercise.

(3 marks)

(ii) Describe three methods that could be used by companies to repurchase shares.

(3 marks)

(c) EAPL Limited is considering raising money for repurchasing 200,000 shares. The company's outstanding shares before the share repurchase exercise are 6.2 million and the respective earnings per share (EPS) is Sh.8.00. The market price per share (MPS) are the time of repurchase is Sh.100.00. The prevailing after-tax cost of borrowing is 12%.

#### Required:

The earnings per share (EPS) after the share repurchase.

(4 marks)

(d) The dividend policy of Clyton Ltd. can be represented by a gradual adjustment to a target dividend payout ratio. The earnings per share (EPS) and dividend per share (DPS) of the company for the previous financial year were Sh.9.00 and Sh.1.80 respectively. It is estimated that the EPS will be Sh.12.00 for the current year. Clyton Ltd. has a 20% target dividend payout ratio and uses a 10-year period to adjust its dividend.

### Required:

The expected dividend per share for the current year.

(3 marks)

(e) An investment analyst gathered the following information about a private company and its publicly traded competitor:

Comparable companies	Tax rate (%)	Debit/equity	Equity beta
Private company	27 👌	1.00	N/A
Public company	36	0.80	1.86

Note: N/A means "not applicable".

### Required:

The estimated equity be for the private company using the pure-play method.

(4 marks)

(Total: 20 marks)

# **QUESTION TWO**

(a) Highlight five benefits that could accrue to a corporation that continuously measures the performance of its managers.

(5 marks)

(b) Beyond the pure comparison of the capital structures, it is equally or even more imperative to identify and understand the country-specific factors that explain the cross-country differences.

### Required:

In relation to the above statement, examine three factors that might be used to explain most capital structure differences in an international comparison. (3 marks)

(c) Citam Investment Group (CIG) owns a significant shareholding in Millennium Bank Ltd. (MBL). MBL contemplates increasing the proportion of debt in their company's capital structure. Raichura Ranchu, an investment and financial analyst who consults for CIG, is concerned that any changes in MBL's capital structure would negatively affect the value of CIG's investment.

CF32 Page 1 Out of 4 Raichura has gathered the following information regarding MBL to evaluate the potential impact of such a capital structure change on CIG's investment:

Current selected financial information for MBL									
Yield to maturity on debt	16%								
Market value of debt	Sh.200 million								
Number of shares	20 million								
Current market price per share (MPS)	Sh.60.00								
Cost of capital (if the firm is all equity financed)	11.2%								
Marginal tax rate	30%								

It is expected that an increase in MBL's financial leverage would lead to an increase in its cost of debt and equity. According to previous statistics of firms in MBL's industry, Raichura estimates the cost of debt and the cost of equity at various debt-to-total capital ratios to be as shown in the table below:

Estimates of MBL's before	ore-tax costs of debt a	nd equity
Debt-to-total capital ratio (%)	Cost of debt (%)	Cost of equity
21	8.9	13.6
32	9.5	14.1
43	10.4	15.3
54	11.5	17.2

### Required:

(i) The current capital structure of MBL.

(3 marks)

(ii) The current after-tax cost of debt and cost of equity for MBL

(4 marks)

(iii) Debt-to-total capital ratio that would minimise MBL's weighted average cost of capital (WACC). (5 marks)

(Total: 20 marks)

# **QUESTION THREE**

(a) Interpret the following terms as used in Islamic finance:

(i)	Murabaha.		(1 mark)
(ii)	Ijara.	usands of the second of the se	(1 mark)
(iii)	Muduraba.	NO.	(1 mark)
(iv)	Musharaka.		(1 mark)
(v)	Sukuk.	2000	(1 mark)

(b) Outline three objectives of short-term borrowing strategy.

(3 marks)

- (c) Kagio Traders Ltd. (KTL) is a small company with high prospects of growth. In the last one year, KTL has experienced problems in developing a sound short-term borrowing strategy. In relation to this, KTL has recently consulted Samson Mwashumba, an investment and financial analyst to help the company in developing the most cost effective form of short-term borrowing strategy. Mwashumba's initial task is to evaluate three possible means of borrowing Sh.2 million for one month as indicated below:
  - 1. Drawing down on a line of credit with an interest rate of 14.4% per annum and a 0.5% per annum commitment fee on the full amount with no compensating balances.
  - 2. A bankers acceptance at an interest rate of 14.2% per annum, an all inclusive rate.
  - A commercial paper at an interest rate of 13.8% per annum with a dealer's commission of 0.25% and a backup line cost of a 0.33% per annum, both of which would be assessed on the Sh.2 million commercial paper issued.

### Required:

The form of borrowing that would result in the lowest cost of credit.

(12 marks)

(Total: 20 marks) CF32 Page 2 Out of 4

### **QUESTION FOUR**

- (a) Evaluate three disadvantages of using comparable company analysis approach of valuing firms undertaking mergers and acquisitions.
   (3 marks)
- (b) Kimbo Ltd. is planning to acquire Kasuku Ltd. As a corporate financial analyst, you have been tasked by Kimbo Ltd. to estimate a fair acquisition price for Kasuku Ltd.

### Additional information:

- 1. Kasuku Ltd. has 20,000,000 outstanding shares and no debt. It is estimated that the post-merger free cash flows (FCF) from Kasuku Ltd. would be Sh.30 million, Sh.34 million, Sh.40 million and Sh.46 million at the end of year 1, year 2, year 3 and year 4 respectively.
- 2. After year 4, it is projected that the free cash flow would grow at a constant rate of 7.5% annually. The appropriate discount rate is estimated to be 12%. It is also estimated that after four years, Kasuku Ltd. would be worth 25 times its free cash flow at the end of year 4.
- 3. Three companies, Joma Ltd., Elianto Ltd. and Golden Ltd. are comparable to Kasuku Ltd. Three recent takeover transactions similar to the takeover of Kasuku Ltd. have been identified, namely Peto Ltd., Diso Ltd. and Kero Ltd. and it is further believed that price-to-earnings, price-to-sales, and price-to-book value price multiples of these companies could be used to estimate the value of Kasuku Ltd.

The relevant data for the three comparable companies together with that of Kasuku Ltd. are as follows:

Valuation variables	Joma Ltd.	Elianto Ltd.	. Golden Ltd. Kasuku					
	Sh.	Sh.	Sh.	Sh.				
Market price per share	45.00	24.00	52.00	32.00				
Earnings per share	4.02	2.26	3.04	2.86				
Sales per share	21.32	15.44	19.30	18.36				
Book value per share	16.32	8.36	12.50	11.02				

In addition, the relevant data for the three recently according to companies is as shown in the table below:

Valuation variables	Peto Ltd.	Siso Ltd. Sh.	Kero Ltd. Sh.
Pre-takeover share price	2580	44.40	30.00
Acquisition share price	€ <sup>2</sup> 9.00	53.00	35.10
Earnings per share (EPS)	2.80	3.20	2.70
Sales per share	11.06	21.82	30.86
Book value per share	9.38	11.28	10.34

### Required:

- (i) The present value per share of Kasuku Ltd. using the discounted cash flow approach if the terminal value of Kasuku Ltd. is based on using the constant growth model to determine terminal value. (3 marks)
- (ii) The value per share of Kasuku Ltd. using the discounted cash flow approach if the terminal value of Kasuku Ltd. is based on using the cash flow multiple method to determine terminal value. (3 marks)
- (iii) The average share price of Kasuku Ltd. for the three relative valuation ratios, given that it is traded at the mean of the three valuations. (4 marks)
- (iv) Estimate the fair acquisition price of Kasuku Ltd. based on the comparable company approach, taking into account the mean takeover premium on recent comparable takeovers. (3 marks)
- (v) The fair acquisition share price of Kasuku Ltd. using the comparable transaction approach. (4 marks)

  (Total: 20 marks)

### **QUESTION FIVE**

(a) Although the principles of capital budgeting might seem straight forward, applying the principles to real world investment opportunities could be challenging.

#### Required:

Discuss three mistakes that corporate financial analysts might make when analysing capital budgeting projects.

(3 marks)

(b) Although the capital budgeting model is widely employed in measuring income and valuing projects, financial analysts also use other procedures to divide up the cash flows from a company or project and then value them using discounted cash flow methods.

## Required:

Describe the following models for measuring income and valuing assets:

(i) Economic profit model.

(2 marks)

(ii) Residual income model.

(2 marks)

(iii) Claims valuation model.

(2 marks)

(c) Edward Mutemi, an investment and financial analyst working with Fiduciary Financial Services (FFS) is evaluating a project for one of his clients operating in the electronics sector, Fantec Solutions 146.

The following information relates to the project:

- Fixed capital outlay is Sh.3 billion.
- Investment in net working capital is Sh.0.8 billion.
- The project is expected to have a useful life of 12 years.

# Additional information:

- 1. Fantec Solutions Ltd. adopts a straight-line depreciation method over a 6-year period with zero salvage value.
- 2. Additional annual revenues are expected to be \$\hat{h}.0.2 billion.
- 3. Annual cash operating expenses will be reduced by Sh.0.5 billion.
- 4. The capital equipment will be sold for Sh.1.00 billion in year 12.
- 5. The corporate tax rate is 30%.
- 6. The project required rate of return \$10%.

### Required:

(i) The annual after-tax operating cash flows for year 1 to year 6.

(2 marks)

(ii) The annual after-tax operating cash flows for year 7 to year 12.

(1 mark)

(iii) The initial project outlay.

(2 marks)

(iv) The terminal year after-tax non-operating cash flow.

(3 marks)

(v) The net present value of the project.

(3 marks)

(Total: 20 marks)

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Present Value of 1 Received at the End of *n* Periods:

PVIF,	. = '	1/(1	+r)" =	:(1-	+·r)-"

Period	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	12%	14%	15%	16%	18%	20%	24%	28%	32%	36%
1	.9901	.9804	.9709	9615	.9524	.9434	.9346	.9259	.9174	.9091	.8929	8772	.8696	.8621						
2	.9803	.9612	.9426	.9246	.9070	.8900	8734	.8573	.8417	.8264	.7972	.7695	.7561		.8475	.8333	:8065	.7813	7576	.735
3	9706	.9423	.9151	.8890	.8638	.8396	.8163	.7938	.7722	.7513	.7118	.6750	.6575	.7432	.7182	.6944	.6504	.6104	5739	.540
4	.9610	.9238	.8885	.8548	.8227	.7921	.7629	.7350	.7084	.6830	.6355	.5921		.6407	.6086	.5787	.5245	.4768	.4348	.397
5	.9515	.9057	.8626	.8219	.7835	.7473	.7130	.6806	.6499	.6209	.5674	5194	.5718	.5523	.5158	.4823	.4230	.3725	.3294	.292
								1,7000	.0100	.0203	.5074	3134	.4972	.4761	.4371	.4019	.3411	.2910	.2495	.214
6	.9420	.8880	.8375	.7903	.7462	.7050	:6663	.6302	.5963	.5645	.5066	.4556	.4323	.4104	2704	2240				
7	.9327	.8706	.8131	.7599	.7107	.6651	.6227	.5835	.5470	.5132	.4523	.3996	.3759	.3538	.3704	.3349	.2751	.2274	.1890	.158
8	.9235	.8535	.7894	.7307	.6768	.6274	.5820	.5403	.5019	.4665	.4039	.3506			.3139	.2791	.2218	:1776	.1432	.116
9	.9143	.8368	.7664	.7026	.6446	.5919	.5439	.5002	.4604	.4241	.3606	3075	.3269	.3050	.2660	.2326	.1789	.1388	1085	.085
10	.9053	.8203	.7441	.6756	.6139	.5584	.5083	.4632	.4224	.3855	.3220	.2697	.2843	.2630	.2255	.1938	.1443	.1084	.0822	.062
										.0000	.3220	.2031	.2472	.2267	.1911	.1615	.1164	.0847	.0623	.046
. 11	.8963	.8043	.7224	.6496	.5847	.5268	.4751	.4289	.3875	.3505	.2875	.2366	.2149	.1954	.1619	1210				
12	.8874	7885	.7014	.6246	.5568	.4970	.4440	.3971	.3555	.3186	.2567	.2076	.1869	1685	.1372	.1346	.0938	.0662	.0472	.034
13	.8787	.7730	.6810	.6006	.5303	.4688	.4150	3677	.3262	.2897	.2292	.1821	.1625	.1452		.1122	.0757	.0517	.0357	.02
14	.8700	.7579	.6611	.5775	.5051	.4423	.3878	.3405	.2992	.2633	.2046	.1597	.1413	.1252	.1163	.0935	.0610	.0404	.0271	.018
15	.8613	.7430	.6419	.5553	.4810	.4173	.3624	3152	.2745	.2394	1827	.1401	.1229	.1079	.0985	.0779	.0492	.0316	.0205	.013
									.2	.2004	.1021	.1401	.1223	.1079	.0835	.0649	.0397	.0247	.0155	005
16	.8528	.7284	.6232	.5339	.4581	.3936	.3387	.2919	.2519	.2176	.1631	.1229	1069	.0930	0700	0544				
17	.8444	.7142	.6050	.5134	.4363	.3714	.3166	.2703	.2311	.1978	.1456	.1078	.0929	.0802	.0708	.0541	.0320	.0193	.0118	.007
18	.8360	.7002	.5874	.4936	.4155	.3503	.2959	2502	.2120	.1799	.1300	.0946	.0808	.0691	.0508	.0451	.0258	.0150	.0089	.005
19	.8277	.6864	.5703	.4746	.3957	.3305	.2765	.2317	.1945	.1635	.1161	.0829	.0703	.0596	. ( )	.0376	.0208	.0118	.0068	.003
20	.8195	.6730	.5537	.4564	.3769	.3118	.2584	.2145	.1784	.1486	1037	.0728	.0611		0431	.0313	.0168	.0092	.0051	.002
									.,,,,	.1400	1037	.0120	.0011	3160.	.0365	.0261	.0135	.0072	.0039	.002
25	.7798	.6095	.4776	.3751	.2953	.2330	.1842	.1460	.1160	.0923	.0588	.0378	.0304	0245	.0160	0106	0040	0004		
30	.7419	.5521	.4120	.3083	.2314	.1741	.1314	.0994	.0754	.0573	.0334	.0196	.0151	4 7 -		.0105	.0046	.0021	.0010	000
40	.6717	.4529	.3066	.2083	.1420	.0972	.0668	0460	.0318	.0221	.0107	.0053	.0037	.0026	.0070	.0042	.0016	.0006	.0002	.000
50	.6080	.3715	.2281	.1407	.0872	0543	.0339	.0213	.0134	.0085	.0035	.0014	9009	.0026	.0013	.0007	.0002	.0001		
60	.5504	.3048	.1697	.0951	.0535	.0303	.0173	.0099	.0057	.0033	.0011	.0004			.0003	.0001	•		•	
										.0000	.0011	. ( ( )	,0002	.0001	•	•	•			

Present Value of an Annuity of 1 Perperiod for n Periods:
$$PVIF_{rt} = \sum_{r=1}^{n} \frac{1}{(1+r)^r} = \frac{1 - \frac{1}{(1+r)^n}}{1 - \frac{1}{(1+r)^n}}$$

payments	1%	2%	3%	4%	5%	6%	87%	8%	9%	10%	12%	14%	15%						
1	0.9901	0.9804	0.9709	0.9615	0.9524	0.9434	0.00.00					14/6	15%	16%	18%	20%	24%	28%	32%
2	1.9704	1.9416	1.9135			7_0				0.9091		0.8772	0.8696	0.8621	0.8475	0.8333	0.8065	0.7813	0.7576
3	2.9410	2.8839	2.8286			2.6730				1.7355			1.6257	1.6052	1.5656		1.4568		1.3315
4	3.9020	3.8077	3.7171			3.4651				2.4869			2.2832	2.2459	2.1743		1,9813	1.8684	
5	4.8534	4.7135		4.4518		•	3.3872 4.1002			3.1699			2.8550	2.7982	2.6901	2.5887	2.4043		2.0957
					3	7.2124	4.1002	3.9927	3.8897	3.7908	3.6048	3.4331	3.3522	3.2743	3.1272	2.9906	2.7454		2.3452
6	5.7955	5.6014	5.4172	5 2421	<b>0</b> 5.0757	4.9173	4 7006	4 6000										2.0020	2.3402
7	6.7282	6.4720	6.2303		4	5.5824					4.1114		3.7845	3.6847	3.4976	3.3255	3.0205	2 7594	2.5342
8	7.6517	7.3255			6.4632					4.8684			4.1604	4.0386	3.8115	3.6046	3.2423		2.6775
9	8.5660	8.1622				5.8017				5.3349			4.4873	4.3436	4.0776	3.8372	3.4212		
10	9.4713	8.9826			7.7217	7.3604	7.0236		-	5.7590			4.7716	4.6065	4.3030	4.0310	3.5655	3.1842	
						1.5001	7.0236	6./101	6.4177	6.1446	5.6502	5.2161	5.0188	4.8332	4.4941	4.1925	3.6819	3.2689	
11	10.3676	9.7868	9.2526	8.7605	8.3064	7.8869	7.4987	7 4200										4.2000	1.3304
12	11.2551	10.5753	9.9540		B.8633	8.3838	7.9427			6.4951		5.4527	5.2337	5.0286	4.6560	4.3271	3.7757	3.3351	2.9776
13		11.3484				8.8527	8.3577		7.1607	6.8137	6.1944	5.6603	5.4206	5.1971	4.7932	4.4392	3.8514	3.3868	3.0133
		12.1062				9.2950			7.4869	7.1034	6.4235	5.8424	5.5831	5.3423	4.9095	4.5327	3.9124	3.4272	3.0404
15	13.8651	12.8493	11 9379	11 1184	10 3797	0.7500	8.7455	8.2442	7.7862	7.3667	6.6282	6.0021	5.7245	5.4675	5.0081	4.6106	3.9616	3.4587	
					10.3737	3.7122	9.1079	8.5595	8.0607	7.6061	6.8109	6.1422	5,8474	5.5755	5.0916	4.6755		3.4834	0.000
16	14.7179	13.5777	12.5611	11 6523	10 8379	10 1050	0.4466											0.1004	3.0704
17	15.5623	14.2919	13 1661	12 1657	11 27/11	10.1059	9.4466	8.8514		7.8237		6.2651	5.9542	5.6685	5.1624	4.7296	4.0333	3 5026	3.0882
18	16.3983	14.9920	13 7535	12.6593	11.2741	10,4773	9.7632	9.1216	8.5436		7.1196	6.3729	6.0472	5.7487	5.2223	4.7746	4.0591	3.5177	3.0971
19	17.2260	15.6785	14 3238	13 1339	12.0050	10.0276	10.0591	9.3719	8.7556	8.2014	7.2497	6.4674	6.1280	5.8178	5.2732	4.8122	4.0799	3.5294	3 1039
20	18.0456	16.3514	14 8775	13.5903	12.0000	11.1501	10.3356	9.6036	8.9501	8.3649	7.3658	6.5504	6.1982	5.8775	5.3162	4.8435	4.0967	3.5386	3 1090
				10.0000	12.4022	11.4699	10.5940	9.8181	9.1285	8.5136	7.4694	6.6231	6.2593	5.9288	5.3527	4.8696		3.5458	
25	22.0232	19.5235	17 4131	15 6221	14 0939	12 7024	11 0520	40.004-	9.8226									3,5450	3 (123
30	25.8077	22.3965	19.6004	17.2920	15 3725	13.7640	17.6536	10.6748	9.8226 10.2737	9.0770		6.8729	6.4641	6.0971	5.4669	4.9476	4.1474	3.5640	3.1220
40	32.8347	27.3555	23.1148	19.7928	17 1591	15.7648	12.4090	11.2578	10.2737 10.7574	9.4269	8.0552	7.0027	6.5660	6.1772	5.5168	4.9789	4.1601	-	3 1242
50	39.1961	31.4236	25.7298	21 4822	18 2559	15.7610	13.3317	11.9246	10.7574 10.9617	9.7791	8.2438	7.1050	6.6418	6.2335	5.5482	4.9966		3.5712	
60	44.9550	34,7609	27.6756	22 6235	18 9293	16.1019	13.8007	12.2335	10.9617 11.0480	9.9148	8.3045	7.1327	6.6605	6.2463	5.5541	4.9995		3.5714	
					.0.5233	10.1014	14.0392	12,3766	11.0480	9.9672	8.3240	7.1401	6.6651	6.2402	5 5553			3.5714	3.1230